

# *Basic Analysis of Calls from Suzhou Psychological Aid Hotline from 2010 to 2020*

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**Abstract:** Objective: Through analyzing the data and content of incoming calls from Suzhou psychological aid hotline from 2010 to 2020, this paper summarizes the hotline service situation and its development trend year by year, and understands the specific situation of hotline work and the demands of hotline callers. Methods: 25356 calls from Suzhou psychological assistance hotline from January 2010 to November 2020 were selected as the research objects. According to the data type, time and basic demographic information, the data were classified. Quantitative statistics and data analysis were used to analyze and study the data by SPSS. Results: 1. The main types of calls were mental and psychological (33.6%), followed by love (13.19%) and marriage and family problems (11.05%). 2. More electricity came from women (12,694 times) than from men (12,662 times); 3. There is seasonal fluctuation in the incoming electricity from the hotline, which is higher in the first and fourth quarters and less in the second and third quarters. Conclusion: Psychological hotline problems mainly focus on mental psychology, love, marriage and family problems, Incoming electricity has gender and seasonal differences and fluctuations, especially gender roles have an impact on the psychological troubles of visitors. Operators need to have professional knowledge in the above aspects and properly use the gender framework to provide psychological counseling and analysis to callers.

## 1. Introduction

With the development of domestic social economy and increasingly fierce social competition, people's psychological pressure is also increasing day by day, which has become one of the main issues that have attracted much attention in contemporary society. Urgent psychological crisis problems, including emotional runaway, acute stress, post-traumatic psychological stress, etc., have always been one of the important causes of impulsive suicide, self-injury or wounding. Psychological hotline has the characteristics of timeliness, focus and no regional obstacles, which is of great significance and value in solving many psychological crisis problems and preventing psychological and behavioral problems [1]. In recent years, under the extensive promotion of the National Health Committee, regional mental health centers and mental health centers, psychological aid hotlines have become a wide range of methods to prevent suicide, relieve depression, anxiety and other common

psychological problems, and are also an important way to promote the mental health of residents everywhere [2].

In May 2007, the public welfare psychological counseling hotline of Suzhou Guangji Hospital was opened. In October 2008, the Jiangsu Provincial Health Department decided that Suzhou City would be included as a psychological assistance hotline in the "12320" construction pilot. In May 2009, according to the requirements of superiors, the psychological counseling hotline of Suzhou Guangji Hospital was officially included in the Suzhou Public Health Public Welfare Hotline "12320" and was called the "Suzhou Psychological Assistance Hotline". By 2020, Suzhou's psychological aid hotline has been in operation for more than 10 years, answering tens of thousands of calls from psychological crisis. Over the years, it has tried various ways to carry out hotline service and achieved excellent results. However, there is still more room for development and the possibility of progress in the future, which is also the direction that we hope to find in this study. This paper summarizes and analyzes the data and contents of incoming calls from Suzhou psychological aid hotline from January 2010 to November 2020, discusses the demand of different genders and types of incoming calls, and tries to formulate better psychological intervention methods for callers.

## **2. Objects and Methods**

### **2.1 Basic Information of Objects**

According to the data recorded in the annual reports of Suzhou psychological aid hotline, the wiring system record form and the manual registration form of voluntary psychologists, the hotline receiving data from 2008 to 2020 are taken as the research object. Due to the large time span, the relevant data loss rate from 2008 to 2009 is relatively high, so it is not taken as the research target.

From 2010 to 2017, a total of 9,273 calls were received and 32 high-risk suicide calls were received. From January 1, 2018 to November 2020, Suzhou's psychological aid hotline had a total of 16,083 connections, including 255 high-risk suicide calls.

### **2.2 Research Methods**

Due to the limitation of relevant data, the study includes five dimensions: year, quarter, hotline frequency, caller gender and caller region. Among them, the quarterly division is the first quarter from January to March, the second quarter from April to June, and so on. The division of hotline shifts is based on day shift from 8: 00 a.m. to 5: 00 p.m. and night shift from 5: 00 p.m. to 8: 00 a.m. the next day. Among them, night shift will be performed from 2010 to 2013, day shift will be performed from 2014 to 2016, and shift will be divided according to hotline call time from 2017 to 2020. Caller areas are divided into local and foreign areas according to their home locations.

According to the requirements of the unified national planning, the incoming call information is classified and counted according to the standardized classification method. According to the incoming call content, it is divided into ten types: physical diseases, mental psychology, love problems, marriage and family, sexual problems, children's education, work problems, interpersonal relationships, learning problems and other problems. Other questions refer to calls for information, mental health knowledge, praise, complaints, etc.

### 3. Data Analysis and Conclusion

#### 3.1 Electricity Analysis Year by Year

##### 3.1.1 Data of wiring volume in each quarter year by year

From the view of the statistical results of the station-times of drought occurrence, the total years o From 2010 to 2020, Suzhou's psychological aid hotline has wired 25,356 calls, showing a significant upward trend year by year. It can also be clearly seen that the data of receiving electricity from 2017 to 2019 shows an upward trend year by year. According to the quarterly quantity of each year, the specific data are shown in Table 1:

Table 1: Data Chart of Hotline Contact Quantity over the Years

| Year         | Quarter of a Year |      |      |       | Total | Annual Growth Rate | Percentage |            |
|--------------|-------------------|------|------|-------|-------|--------------------|------------|------------|
|              | 1-3               | 4-6  | 7-9  | 10-12 |       |                    | of total   | Cumulative |
| 2010         | 128               | 139  | 126  | 110   | 503   | -                  | 1.98%      | 1.98%      |
| 2011         | 219               | 119  | 192  | 216   | 746   | 48.31%             | 2.94%      | 4.92%      |
| 2012         | 260               | 136  | 185  | 226   | 807   | 8.18%              | 3.18%      | 8.10%      |
| 2013         | 219               | 195  | 197  | 221   | 832   | 3.10%              | 3.28%      | 11.38%     |
| 2014         | 241               | 212  | 188  | 293   | 934   | 12.26%             | 3.68%      | 15.06%     |
| 2015         | 284               | 214  | 216  | 290   | 1004  | 7.50%              | 3.96%      | 19.02%     |
| 2016         | 393               | 310  | 232  | 399   | 1334  | 32.87%             | 5.26%      | 24.28%     |
| 2017         | 791               | 728  | 682  | 793   | 2994  | 124.44%            | 11.81%     | 36.09%     |
| 2018         | 839               | 731  | 754  | 1010  | 3334  | 11.36%             | 13.15%     | 49.24%     |
| 2019         | 1662              | 1216 | 1356 | 1702  | 5936  | 78.04%             | 23.42%     | 72.66%     |
| 2020         | 2083              | 1604 | 1512 | 1733  | 6932  | 16.78%             | 27.34%     | 100.00%    |
| <b>Total</b> | 7119              | 5604 | 5640 | 6993  | 25356 | 1278.13%           | 100%       |            |

Judging from the data, from 2010 to 2020, the amount of electricity received by the hotline increased to different degrees in each year, showing an upward trend year by year.

##### 3.1.2 Distribution of incoming call types year by year

According to the classification method mentioned above, based on the data in Table 1, the proportion of incoming calls of various categories in each year is compared. Due to the small amount of data between 2010 and 2016, the data are merged.

The specific data are shown in Table 2.

Table 2: Comparison Chart of Electricity Category Proportion over the Years

| Category                    | 2010-2016 | 2017   | 2018   | 2019   | 2020   | Percentage |
|-----------------------------|-----------|--------|--------|--------|--------|------------|
| Physical Diseases           | 4.76%     | 5.11%  | 4.85%  | 6.11%  | 6.76%  | 5.68%      |
| Mental Psychology           | 35.20%    | 29.42% | 27.10% | 35.68% | 35.56% | 33.66%     |
| Love Problems               | 7.56%     | 12.88% | 14.09% | 16.21% | 15.29% | 13.19%     |
| Marriage and Family         | 7.06%     | 8.85%  | 16.68% | 12.65% | 11.47% | 11.05%     |
| Sexual Problems             | 4.17%     | 2.97%  | 3.89%  | 5.63%  | 4.78%  | 4.50%      |
| Children's Education        | 8.77%     | 4.77%  | 4.32%  | 5.85%  | 6.08%  | 6.29%      |
| Work Problems               | 7.78%     | 4.84%  | 3.05%  | 3.96%  | 4.26%  | 4.95%      |
| Interpersonal Relationships | 6.88%     | 4.58%  | 3.46%  | 6.99%  | 7.14%  | 6.26%      |
| Learning Problems           | 4.53%     | 4.98%  | 4.23%  | 5.81%  | 3.18%  | 4.47%      |
| Other Problems              | 13.29%    | 21.60% | 18.33% | 1.11%  | 5.48%  | 9.95%      |
| <b>Total</b>                | 6160      | 2994   | 3334   | 5936   | 6932   | 25356      |

Judging from the data, the proportion of mental and psychological problems continues to be high, and the proportion of love feelings and marriage and family is also relatively high. The proportion of other categories is between 4% and 8%, which is extremely small. Among them, learning problems and sexual problems have the least amount of electricity.

### 3.2 Data Analysis of Overall Gender, Quarter and Shift

The overall data over the past few years are divided according to the frequency in four quarters and within the quarter, and the seasonal and white night shift trends of the number of incoming calls between men and women are compared. The specific data are shown in Table 3.

*Table 3: Sex Comparison Data of Shift Calls by Quarter*

|                 | January-March |       | April-June |       | July-September |       | October-December |       | Total |
|-----------------|---------------|-------|------------|-------|----------------|-------|------------------|-------|-------|
|                 | Day           | Night | Day        | Night | Day            | Night | Day              | Night |       |
| Male            | 1808          | 1508  | 1637       | 1252  | 1681           | 1195  | 1902             | 1556  | 12539 |
| Female          | 1985          | 1458  | 1727       | 1311  | 1598           | 1308  | 1951             | 1479  | 12816 |
| Total shifts    | 3793          | 2966  | 3364       | 2563  | 3279           | 2503  | 3853             | 3035  | 25356 |
| Quarterly Total | 6759          |       | 5927       |       | 5782           |       | 6888             |       |       |

Judging from the data, the incoming electricity in the first quarter and the fourth quarter increased compared with the second and third quarters, but the overall incoming electricity in each quarter basically tended to be balanced. During the same period, the number of incoming calls from day shift was significantly higher than that from night shift, while the number of incoming calls from women was slightly higher than that from men. At the same time, in the first and fourth quarters, men are more inclined to call hotlines at night. In the second and third quarters, women generally received more electricity at night than men.

## 4. Conclusions and Discussion

### 4.1 Preliminary Analysis on the Change of Electric Quantity Connected by Hot Wire

From 2010 to 2020, the rising trend of incoming electricity is obviously closely related to the gradual development and promotion of hotline work. The data show a seasonal and growing trend on the whole, and the seasonal changes are accompanied by the growth of the overall incoming electricity, and the overall proportion is close to equilibrium. From an average of 1.4 calls per day in 2010 to an average of 19 calls per day in 2020, the total number of calls received increased by 1278.13%.

### 4.2 Analysis of Seasonal Changes and Gender Differences in Incoming Electricity

According to the relevant data combined with quarterly division, in the first and fourth quarters, that is, from November of that year to March of the following year, the amount of electricity coming from the hotline generally increased, and men called the hotline more at night. Of all the hotline calls, Mental and psychological categories account for the highest value of the total data, and many psychological problems, including mood, are affected by seasonal changes and temperature changes. In more extensive research, seasonal emotional disorder (SAD) is a common psychological problem, which often occurs in autumn and winter every year, such as depression, anxiety and other psychological problems, and improves when the weather warms up. In the Manual of Diagnosis and Statistics of Mental Illness DSM-IV and DSM-5, SAD is regarded as an explanatory symptom with "seasonal characteristics".

At the same time, because this period includes large festivals such as New Year's Eve and Spring Festival, Also at an important stage of the year, For example, at the end of each year, there are widespread situations such as increased workload and pressure during the Spring Festival. All of them have increased people's psychological pressure and burden, especially men, who are more likely to suffer from the pressure expected by the society. This sense of pressure forces men to try to express their emotions at night, which is also the possibility conjecture that men will increase their electricity consumption at night in the first and fourth quarters.

### 4.3 Discussion on Year-by-Year Change of Caller Types

Among the ten types of calls planned by the national system, mental and psychological calls account for the largest part of the total, which is consistent with previous studies [3] and also corresponds to the general policy of the psychological aid hotline. Secondly, love emotion and marriage and family calls are also relatively high, especially since 2017, the proportion of the number of these two types of calls has also increased significantly. Considering that this phenomenon may be related to the prevalence of love fashion and the increasing divorce rate year by year, more and more people have greater contradictions and differences in love and marriage, thus making each other's psychology more and more vulnerable.

In addition, other problems also have relatively large incoming electricity (9.95%), especially in 2017 and 2018, there were many cases of asking hospitals (Suzhou Guangji Hospital) for information, seeking medical advice, registering for medical treatment, dialing the wrong number, etc. This also resulted in more other calls in the past two years. After further publicity and popularization, most other calls were referred to other consultation calls, so the number of irrelevant calls in the psychological aid hotline gradually decreased.

### 4.4 Impact of Gender Perceptions on Hotlines

As for the gender and time difference of the amount of electricity coming from the psychological hotline, this paper attempts to make a certain analysis from the perspective of the media characteristics of the telephone and the social gender concept.

In media communication, hotlines have the dual characteristics of opening and closing. On the one hand, callers can express their feelings and expose themselves through hotlines. On the other hand, hotline communication only involves voice, which can ensure one's anonymity and physical privacy. This anonymity encourages clients to further open their hearts and express their feelings. At the same time, clients have the initiative in hotline calls and can interrupt calls according to environmental changes, thus enhancing their sense of security and willingness to communicate on the phone. This makes the psychological hotline an important channel for clients to talk to strangers and disclose themselves [7].

Generally speaking, the clients of the psychological hotline tend to make phone calls when they are alone. Once there are signs that others are breaking their solitude, they will end or even hang up the dialogue at any time.

The difference in the number of hotlines called by men and women at night and in white may be related to the difference in their time alone. Women, especially housewives, are busy cooking and raising their children at night and spend relatively more time alone during the day. Men are mostly busy with their work during the day and spend more time alone at night.

The difference between men and women in their time alone also reflects the difference in their gender roles. According to the social gender theory, most of the differences in gender roles between men and women are not based on congenital social factors, but are the products of later social cultivation and construction.

In traditional society, people have constructed traditional gender perspectives. The traditional gender perspective emphasizes that men are strong and women are weak, men are high and women are low, men are dominant outside and women are dominant inside, men are rational and women are emotional [8]. These social gender concepts are not born, because the edification of social and cultural concepts is deeply rooted in people's minds and still exerts a subtle influence in a modern society that advocates equality between men and women.

These stereotypes of traditional gender roles will cause many conflicts in real life. Women are more responsible for housework and child-rearing, while men are more absent in housework and child-rearing, and often act as shopkeeper in family life [9].

In the hotline with the theme of marriage and family, the number of female callers is more than that of male callers. Many female callers will complain that their husbands are busy with work and social activities all the year round, ignoring family life and housework, resulting in conflicts between husband and wife and interpersonal troubles.

When it comes to children's psychology and discipline, mothers are more likely than fathers to call psychological hotlines. Fathers are relatively absent from their children's education. In terms of children's relationship, it is generally the mother and the child who have closer relationship and communicate more with the child. Father is more accusing and intensifying the problem. This also reflects the influence of gender.

Gender concepts can also affect the relationship between men and women. In the aspect of love relationship, most of the calls are made by young women, who usually tell their boyfriends about their male chauvinism and rudeness.

These conflicts between traditional social gender and modern life concepts make some women face psychological pressure and inner conflicts. If they lack sufficient social support when dealing with psychological crisis, they will feel helpless and anxious.

At the same time, the social gender concept will also have an impact on men. In the traditional gender concept, men are the mainstay of the family. Men need to be rational and their main energy needs to be on work. This will also bring pressure on men's social expectations. These social gender role consciousness controls them during daytime social activities and restricts them to express fragile and negative emotions and seek help. Only in the dead of night can they slightly reduce the restriction of gender roles and express their feelings to strangers through the hotline. Relevant foreign studies have also found that men are less likely to seek psychological help through hotline counseling services, which also leads to excessive depression of their negative emotions and inability to obtain suitable psychological services in time [10-11].

#### **4.5 Discussion on the Working Mode of Psychological Aid Hotline**

From 2010 to 2016, the hotline consists of a full-time psychological hotline service team composed of doctors, nurses and other professional medical personnel from various departments of Suzhou Guangji Hospital and a small number of psychological consultants to work on the psychological hotline. The psychological assistance hotline will be opened from 8: 00 a.m. to 5: 00 p.m. every day.

Starting from 2017, Suzhou Mental Health Center will be in charge of recruiting psychological volunteers with professional qualifications to carry out hotline work, including qualifications such as psychological consultant certificate, psychological education or medical education background, etc., focusing on pre-job training and teaching, and strictly controlling the service quality of hotline staff. At the same time, regular supervision work will be carried out to strengthen communication and learning interaction among volunteers. The psychological aid hotline will be opened 24 hours a day. All kinds of professional skills training will be carried out from time to time to strengthen the volunteer work ability.

All incoming call information is registered and reported by the volunteer psychologist on duty every day, and the person in charge of the hotline is responsible for statistics and summary of data every month. Except for gender, the caller's personal information cannot be fully and specifically learned in the hotline work, so some information is omitted. By 2020, compared with 2010, from phased wiring to 24-hour wiring throughout the year, from full-time wiring of professional doctors to shift wiring of recruiting volunteer psychologists.

According to the data in Table 1, the growth rate in 2017 and 2019 nearly doubled (124.44%, 78.04%), which is consistent with the two changes in hotline management. Especially after the 24-hour hotline was opened in 2017, the connection volume has more than doubled. As can be seen, the timeliness of the psychological aid hotline is of vital importance. After accessing the national system in 2019, it will increase by 78.04% again, and the incoming electricity will also be affected by hotline publicity and cognitive scope.

In the hotline work and related network evaluation, many callers also expressed that the main demands for the hotline are professionalism and connection rate. However, due to the influence of objective reasons such as limited scheduling personnel, when the telephone has been connected, the telephone is naturally busy and cannot be connected, which also has a certain negative impact on the hotline evaluation. However, it can be seen from this that people have a high demand for 24-hour psychological aid hotlines, which is also the inevitable trend of the gradual development of psychological aid hotlines.

This study attempts to improve the working mode of psychological assistance hotline through the analysis of the contents of incoming calls and the demands of clients in Suzhou City.

According to the types of counseling questions of psychological hotline callers, psychological hotline workers need to formulate targeted intervention measures, and timely carry out return visits and effect evaluation.

Especially regarding the gender differences in male and female counseling, psychological hotline workers need to consider the gender differences in intervention measures. In some cases, staff can properly use the gender framework to provide psychological counseling and analysis to callers, especially women.

For example, for visitors involved in gender conflicts and perplexities in hotline consultation, it can help callers to better perceive internalized gender concepts, understand their complex impacts on self-esteem and self-evaluation, better guide callers to shape more adaptive gender awareness, and avoid binding and interfering with themselves with gender stereotypes.

At present, the problems of marriage, family and love emotion affected by social gender are increasing day by day. Only by guiding men and women to construct benign social gender consciousness, equal respect and harmonious coexistence in marriage and family relations, can they better solve their deep psychological problems, arouse their real self-consciousness, stimulate their potential for self-realization, and get out of the predicament of traditional social gender concepts.

This also puts forward higher requirements for psychological hotline workers. Hotline consultants need to have professional knowledge in family psychology, emotional psychology and gender psychology in order to better carry out hotline psychological assistance.

#### **4.6 Topics and thanks of the project to which the paper belongs**

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